

Amendment under 37 CFR §1.111
Application No. 10/564,091
Attorney Docket No. 053482

REMARKS

- (1) Claims 1-3, 5-8 and 17-22 are pending in this application, of which claims 1, 17 and 20 have been amended. Claim 4 has been cancelled in this Response.
- (2) Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by Soane et al. (U.S. Patent No. 6,379,753). Claims 3-8 and 17-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Soane et al. (U.S. Patent No. 6,379,753) and in view of Hirano et al. (JP 2000-017572).
- (i) Claims 1, 17 and 20 have been amended to incorporate the limitation of claim 4. The amendment is also supported at page 8, lines 10-28 of the original specification, where the carboxyl group is described as being *directly* introduced into the cellulose fiber by carboxymethylation.
- (ii) As taught in Fig. 4, the cotton fiber of Soane et al. is modified by multifunctional polymers. In other words, Soane et al. teach attaching the cotton fiber *directly* to the multifunctional group. See Fig. 4 of Soane et al. The Examiner states that “Hirano et al. disclose a carboxyl group is introduced into the cellulose fiber by carboxymethylation” (page 7 of the Office Action dated March 20, 2009). Hirano et al. teach applying the carboxymethylation *directly* to the cellulose fiber. The *direct* carboxymethylation to the cellulose fiber as taught by

Amendment under 37 CFR §1.111
Application No. 10/564,091
Attorney Docket No. 053482

Hirano et al. cannot be applied to the teaching by Soane et al. The references teach different treatments direct on the cotton fiber or cellulose fiber. Therefore, Soane et al. cannot be combined with Hirano et al. in order to obtain the invention recited in amend claims 1, 17 and 20. Also, even a combination of Soane et al. with Hirano et al. cannot make the invention recited in amend claims 1, 17 and 20.

(iii) In the previous Response, Applicant argued that the Examiner's rejection by modifying Soane et al. with Hirano et al. will destroy the Soane's invention since Soane et al. try to increase water repellency. The Examiner replies that Soane et al. and Hirano et al. are both directed to producing textile materials treated with polymer having grafted hydrophilic group, the art is analogous. Page 3, last 5 lines of the outstanding Office Action.

However, as argued in the previous Response, in Soane et al., the hydrophilic region is used for combining the cotton with the multifunctional polymer, thereby the surface of the treated cotton having a hydrophilic surface, and the hydrophilic regions of both the cotton and the multifunctional polymers are consumed by the Soane's treatment. In Soane et al., the surface of the treated cotton is less hydrophilic. On the contrary, Hirano et al. teach making the cellulose textile more hydrophilic. See paragraph [0008]. In Hirano et al., the surface of the treated cellulose is more hydrophilic.

Amendment under 37 CFR §1.111
Application No. 10/564,091
Attorney Docket No. 053482

In Soane et al., by making the textile hydrophobic, the improvement of properties such as resistance, grease repellency, soil resistance permanent press properties and quickness of drying and detergent free washing (Abstract, col. 5, lines 1-3) is obtained. Although the Examiner states that Soane et al. disclose altering the properties of the textile fiber materials to include detergent free washing (page 3, lines 1-2 of the outstanding Office Action), the teaching by Soane et al. is to increase hydrophobicity. The property obtained by making textile hydrophobic must have been derived from the mechanism different from the property obtained by making textile hydrophilic. Because the teaching by Hirano et al. is to make the cellulose textile more hydrophilic, one of ordinary skilled in the art should consider that Soane et al. cannot be combined with Hirano et al.

(iv) The Examiner further states that Hirano et al. disclose a means for solving the problem of fabric yellowing include making it hard to attach dirt, and the treatment capable of soil (dirt) repellent properties, pointing out paragraph [0008] of Hirano et al. Page 4, lines 2-6 of the outstanding Office Action.

Amendment under 37 CFR §1.111
Application No. 10/564,091
Attorney Docket No. 053482

It appears that the Examiner reads the computer translation of Hirano et al. Applicants herewith submit a translation of paragraph [0008] of Hirano et al., which the Applicants believe more helpful for the Examiner to understand the teaching by Hirano et al.

In paragraph [0008], Hirano et al. deny the idea to make it difficult to attach dirt. Hirano et al. then propose making the textile more hydrophilic in order to make it easy to remove the dirt. We consider that Hirano et al. do not teach soil (dirt) repellent property, but to teach making the textile more hydrophilic. The teaching by Soane et al. is not compatible with the teaching by Hirano et al. If applying Hirano et al. to Soane et al., the objective of Soane et al., making the cotton hydrophobic, will be destroyed. Therefore, there is teaching away from combining Soane et al. with Hirano et al.

(iii) Moreover, in the previous Amendment, the claims were amended to recite a limitation that “the textile product having increased a moisture absorption ratio.” In this respect, the Examiner states as follows:

While Soane et al. disclose all of the claim limitations as set forth above the reference does not explicitly disclose the textile product having an increase in moisture absorption ratio. It is reasonable to presume that an increase in moisture absorption ratio is inherent to Soane et al. Support for said presumption is found in the use of like materials and/or lime methods (i.e., detergent free washing function) which would result in the claimed property.

Amendment under 37 CFR §1.111
Application No. 10/564,091
Attorney Docket No. 053482

Page 5 of the outstanding Office Action. However, as argued in the previous Response, Soane's hydrophilic region is used for combining the cotton with the multifunctional polymer, and the hydrophilic regions are consumed in the Soane's treatment. *See Fig. 2 of Soane et al.* Because the hydrophilic group of cotton is consumed in Soane et al., what is inherent property in Soane et al. is not an increase but a decrease of the moisture absorption ratio.

(v) Regarding claims 17 and 20, the Examiner states that modified Soane et al. disclose all of the claimed limitation. Page 6, last 2 lines of the outstanding Office Action.

However, Soane et al. teach making the textile hydrophobic, whereas Hirano et al. teach making the textile more hydrophilic. Thus, one skilled in the art does not combine Hirano et al. with Soane et al.

Amendment under 37 CFR §1.111
Application No. 10/564,091
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(3) In view of above, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date. If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number indicated below to arrange for an interview to expedite the disposition of this case. If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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SY/mt

Attachment: Verification and Translation of paragraph [0008] of Hirano et al.

Verification of Translation

I, Shuji Yoshizaki, do hereby declare that I am familiar with Japanese and English Languages, and the attached document is a faithful English translation of paragraph [0008] of Hirano et al. (JP 2000-017572).

Date 6/22/09

Name Shuji Yoshizaki

Attachment: English translation of paragraph [0008] of Hirano et al. (JP 2000-017572)

Translation of paragraph [0008] of Hirano et al.

[0008]

[Means for solving a problem]

In considering that the idea that “the dirt is made difficult to attach” will give a demerit to the function for removing skin sweat dirt, that is one of the important functions required for underwear, the inventors of the present invention have changed the idea into “making it easy to remove the dirt.” Focusing on the oily substances, main oily dirt, it has been reached a conclusion that to make the textile hydrophilic can make it easy to remove or wash out the dirt. The present invention has been accomplished by finding that it is effective to make a cellulose textile more hydrophilic while a cellulose textile is originally hydrophilic.